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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,660	11/29/2001	Won Sik Kim	K-0347	2627

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EXAMINER	
LAZARO, DAVID R	
ART UNIT	**PAPER NUMBER**
2155	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/995,660	KIM, WON SIK	
	Examiner	Art Unit	
	David Lazaro	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed 07/25/05.

2. Claims 1, 4, 8, 10, 14, 16 and 18 were amended.

3. Claims 1-21 are pending in this office action.

Response to Amendment/Arguments

4. Applicant's arguments filed 07/25/05, with respect to the rejection of claims 1, 8, 14, and 18 under 35 U.S.C. 112, first paragraph, have been fully considered but they are not persuasive. Therefore the rejection is maintained.

The examiner has clarified the rejection in light of applicant's arguments. Applicant's arguments do not address the specific issues presented in the rejection. Applicant states "*The Office Action appears to question whether a reply to a ping may be received from the same client that issued an IP address allocation request*". This is indeed a question raised by the rejection that applicant's remarks fail address. While the applicant continues with statements related to the specification and descriptions of the claim features, none of these statements or descriptions address this question. The cited portions of the specification and drawings offer no more insight into the actual functionality of the claim features than the claim language itself. For example, this question is directly related to the operation of the claimed feature of the "determining module". The specification describes that the determination module determines "whether a reply to an ICMP ping packet came from a DHCP client requesting an IP address allocation or from another DCHP client" as the claim language states, however,

there is no description of how this module carries out the determination process such that one can make or use the invention. There is no description of how this module can distinguish between a reply from the requesting DHCP client and a reply from another DHCP client. In addition, applicant states on page 9, "*The present specification relates to reconfirming the present condition of IP allocation by determining that a reply to an ICMP ping request is from a DHCP client. S7-S10 of FIG. 4 relate to these features. It is respectfully submitted that these features are not known in the prior art...*". Then applicants states on page 9, *"one skilled in the art would know how to determine whether a reply to an ICMP ping packet came from a DHCP client requesting an IP address allocation or from another DCHP client."* If the features as described in the specification are not known in the prior art, how can one skilled in the art know "*how to determine whether a reply to an ICMP ping packet came from a DHCP client requesting an IP address allocation or from another DCHP client"*, particularly when there is no description, for example, of how the determination module can distinguish between a reply from the requesting DHCP client and a reply from another DHCP client.

5. Applicant's arguments, see the remarks, filed 07/25/05, with respect to the rejection(s) of claim(s) 1-21 under JOIN have been fully considered but they are not persuasive.

6. Applicant argues - "*JOIN does not teach or suggest all these features. In particularly, the Office Action cites JOIN's 'Ping BOOTP Client' and 'Ping Timeout' on page 8 as corresponding to these claimed features. However, these features do not suggest the ability to determine whether a reply to an ICMP ping pack came from a*

DHCP client (requesting the IP address allocation) and if so, then conducting DHCP procedure using registered relevant event information. Rather, the cited section of JOIN merely relates to a server sending an ICMP echo and if a reply is received, then logging an error. See in particularly, the first two lines of the section entitled 'Ping BOOTP Clients'. As such, JOIN does not teach or suggest all of the features of independent claim 1."

a. JOIN specifically describes that the server can uniquely identifying a client based on for example, a MAC address of the client (Page 9 'Restrict to Known MAC address' and 'Use MAC addr as client ID'). Furthermore, JOIN identifies pinging a client an allocating an address to the client when it responds (Page 6 'BOOTP Client Lease Extension"). It is clear that JOIN can distinguish between clients and furthermore perform address allocation procedures when a reply to a ping is received from a requesting client using information relevant information, including client identities as described on Page 9, and the information stored by the server in relation to the relevant IP addresses (Page 8 - "Ping BOOTP Clients'). Based on giving the claims the broadest reasonable interpretation (MPEP 2111), such teachings are within the scope of the claimed limitations.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 8, 14 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, all these claims involve issuing a ping according to a received IP address allocation request of a client. Part of the invention is to use the ping to determine an available IP address as well as determine if a reply to the ping is from the request DHCP client. The IP address to be issued a ping is selected from a free IP address table (Page 10 of specification, also see claim 10). Of concern, in terms of enablement, is the claimed subject matter of receiving a reply to this ping from the same client that issued the IP address allocation request. The disclosure of the invention does not describe how a client requesting an IP address to be allocated is capable of responding to a ping issued to an IP address. If the client is requesting allocation of an IP address, how can the client have an IP address such that it can respond to a ping? This directly relates to the claimed limitation "a determining module that determines whether a reply to the ICMP ping packet came from the DHCP client requesting the IP address allocation or from another DHCP client". There is no description of how this module carries out the determination process. There is no description of how this module can distinguish between a reply from the requesting DHCP client and a reply from another DHCP client.

For these reasons of uncertainty of enablement, the examiner contends that one skilled in the art would not know how to make or use the invention. Therefore the claims fail to comply with the enablement requirement.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by "Join server technical help: Chapter 5 Server/Security Parameter", technical manual from UC Davis Information Resources Unix Help website, November 11, 1996 (Join).

10. With respect to Claim 1, Join teaches A Dynamic Host Configuration Protocol (DHCP) server (Page 1), comprising: an Internet Control Message Protocol (ICMP) module that issues an ICMP ping packet, based on an IP address allocation request from a DHCP client (Page 8 'Ping BOOTP Clients'), and registers relevant event information in a DHCP ping entry (Page 8 'Ping BOOTP Clients' and 'Ping Timeout'); a determining module that determines whether a reply to the ICMP ping packet came from the DHCP client requesting the IP address allocation or another DHCP client (Page 8 'Ping BOOTP Clients' and 'Ping Timeout', Page 6 'Assign name by hardware address', and Page 9 'Restrict to Known MAC address' and 'Use MAC addr as client ID'); and a first operation module that conducts a DHCP procedure using the registered

relevant event information, if the reply is from the DHCP client requesting the IP address allocation, and changes the registered relevant event information through the ICMP module and issues a new ICMP ping packet, if the reply is not from the DHCP client (Page 6, 'BOOTP Client Lease Extension' and Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

11. With respect to Claim 2, Join teaches all the limitations of Claim 1 and further teaches the first operation module erases the registered relevant event information from the DHCP ping entry during the DHCP procedure (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

12. With respect to Claim 3, Join teaches all the limitations of Claim 1 and further teaches the DHCP procedure is a process for allocating a requested IP address to the DCHP client requesting the IP address (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

13. With respect to Claim 4, Join teaches all the limitations of Claim 1 and further teaches a verifying module that conducts a system timer loop, the system timer loop is used to periodically verify the relevant event information registered in the DHCP ping entry; a comparing module that compares an event occurrence time and an out time, which is set in the relevant event information registered in the DHCP ping entry; and a second operation module that conducts the DHCP procedure using the registered relevant event information and erases the relevant event information from the DHCP ping entry, if the event occurrence time is older than the out time set in the corresponding DHCP ping entry (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

14. With respect to Claim 5, Join teaches all the limitations of Claim 4 and further teaches the DHCP procedure is a process for allocating a requested IP address to the DCHP client requesting the IP address (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

15. With respect to Claim 6, Join teaches all the limitations of Claim 4 and further teaches the second operation module erases the registered relevant event information from the DHCP ping entry during the DHCP procedure (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

16. With respect to Claim 7, Join teaches all the limitations of Claim 1 and further teaches a system clock device that provides timing information to the DHCP server (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

17. With respect to Claim 8, Join teaches a method for allocating an Internet Protocol (IP) address by a Dynamic Host Configuration Protocol (DHCP) server (Page 1), comprising: issuing an Internet Control Message Protocol (ICMP) ping packet and registering relevant event information in a DHCP ping entry when an IP address allocation request is received from a DHCP client (Page 8 'Ping BOOTP Clients' and 'Ping Timeout'); conducting a DHCP procedure using the registered relevant event information and erasing the registered relevant event information from the DHCP ping entry, when a reply to the ICMP ping packet is received from the DHCP client requesting the IP address allocation (Page 6 'BOOTP Client Lease Extension' and 'Assign name by hardware address', and Page 9 'Restrict to Known MAC address' and 'Use MAC addr as client ID'); and changing the relevant event information registered in

the DHCP ping entry and issuing a new ICMP ping packet, when the reply to the ICMP ping packet is from another DHCP client (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

18. With respect to Claim 9, Join teaches all the limitations of Claim 8 and further teaches the relevant information includes the IP address, a Media Access Control (MAC) address of the DHCP client, and an event occurrence time (Page 8 'Ping BOOTP Clients' and 'Ping Timeout', Page 6 'Assign name by hardware address', and Page 9 'Restrict to Known MAC address' and 'Use MAC addr as client ID').

19. With respect to Claim 10, Join teaches all the limitations of Claim 8 and further teaches discarding the IP address allocation request, received from the DHCP client, when there is no new IP address available for allocation in a DHCP free IP address table (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

20. With respect to Claim 11, Join teaches all the limitations of Claim 8 and further teaches operating a system timer loop used to periodically verify the DHCP ping entry; comparing an event occurrence time registered in the DHCP ping entry and a set DHCP ping out time; and conducting the DHCP procedure using the registered relevant information and erasing the relevant event information from the DHCP ping entry if the registered event occurrence time is older than the set DHCP ping packet out time (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

21. With respect to Claim 12, Join teaches all the limitations of Claim 11 and further teaches the relevant information includes the IP address, a Media Access Control (MAC) address of the DHCP client, and an event occurrence time (Page 8 'Ping

BOOTP Clients' and 'Ping Timeout', Page 6 'Assign name by hardware address', and Page 9 'Restrict to Known MAC address' and 'Use MAC addr as client ID').

22. With respect to Claim 13, Join teaches all the limitations of Claim 11 and further teaches the system timer loop is operated with a system clock device provided in the DHCP server (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

23. With respect to Claim 14, Join teaches a server (Page 1), comprising: an Internet Control Message Protocol (ICMP) module that issues a ping packet according to a received Internet Protocol (IP) address allocation request (Page 8 'Ping BOOTP Clients' and 'Ping Timeout'); a determining module that determines whether a reply to the issued ping packet came from a first client that requested the IP address allocation or from a second client other than the first client (Page 8 'Ping BOOTP Clients' and 'Ping Timeout', Page 6 'Assign name by hardware address', and Page 9 'Restrict to Known MAC address' and 'Use MAC addr as client ID'); and a first operation module that allocates an IP address to the first client if the first client is determined to have sent the reply (Page 6, 'BOOTP Client Lease Extension' and Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

24. With respect to Claim 15, Join teaches all the limitations of Claim 14 and further teaches the first operation module discards the IP address allocation request if the second client is determined to have sent the reply (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

25. With respect to Claim 16, Join teaches all the limitations of Claim 14 and further teaches a comparing module that compares an event occurrence time stored by the

ICMP module in a ping entry with an out time set in the ping packet (Page 8 'Ping BOOTP Clients' and 'Ping Timeout'); and a second operation module that erases the ping entry if the event occurrence time is older that the out time (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

26. With respect to Claim 17, Join teaches all the limitations of Claim 14 and further teaches a verifying module that repeatedly induces the server to determine whether the reply has been received (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

27. With respect to Claim 18, Join teaches a method of allocating an Internet Protocol (IP) address with a server, comprising: issuing a ping packet according to a received IP address allocation request (Page 8 'Ping BOOTP Clients' and 'Ping Timeout'); determining whether a reply to the issued ping packet came from a first client that requested the IP address allocation or from a second client other than the first client (Page 8 'Ping BOOTP Clients' and 'Ping Timeout', Page 6 'Assign name by hardware address', and Page 9 'Restrict to Known MAC address' and 'Use MAC addr as client ID'); and allocating the IP address to the first client, if the first client is determined to have sent the reply (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

28. With respect to Claim 19, Join teaches all the limitations of Claim 18 and further teaches discarding the IP address allocation request if the second client is determined to have sent the reply (Page 6, 'BOOTP Client Lease Extension' and Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

29. With respect to Claim 20, Join teaches all the limitations of Claim 18 and further teaches comparing an event occurrence time stored in a ping entry with an out time set

in the ping packet (Page 8 'Ping BOOTP Clients' and 'Ping Timeout'); and erasing the ping entry if the event occurrence time is older than the out time (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

30. With respect to Claim 21, Join teaches all the limitations of Claim 18 and further teaches repeatedly determining whether the reply has been received (Page 8 'Ping BOOTP Clients' and 'Ping Timeout').

Conclusion

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Lazaro
October 17, 2005

BHARAT BAROT
PRIMARY EXAMINER